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10/719,398	11/21/2003	Eilleen R. Aviles	D/A3470	2567

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EXAMINER

COLILLA, DANIEL JAMES

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/719,398

Applicant(s)

AVILES ET AL.

Examiner

Daniel J. Colilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,2,4,5,7,11 and 13-16 is/are rejected.
7) ☐ Claim(s) 3,6,8-10 and 12 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20031121.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 6 and 12 are objected to because of the following informalities:

In claim 2, lines 2-3, “a second length” has no proper antecedent basis in the claims.

“Second” implies that a first length has been recited, but none has been in this line of claims.

Perhaps applicant intended this claim to depend from claim 5.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzurucha (JP 11-198362).

With respect to claim 1, Suzurucha discloses an ink image producing machine including an ink jet print head 12, an image receiving station located below the print head 12, a substrate handling assembly 24,22 including holding means 22 for holding a supply of substrates 16 and a transport feeding means 24, a first substrate heating assembly 70 (see paragraph [0022] of the machine translation of Suzurucha) and a second substrate heating assembly 50 located downstream from the first substrate heating assembly 70 and upstream of the image receiving station as shown in Figure 1 of Suzurucha.

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With respect to claim 13, Suzurucha discloses a multi-stage pre-transfer substrate heating assembly in an image producing machine including a first substrate heating assembly 70 (see paragraph [0022] of the machine translation of Suzurucha) and a second substrate heating assembly 50 located downstream from the first substrate heating assembly 70 and upstream of the image receiving station as shown in Figure 1 of Suzurucha.

With respect to claim 14, Suzurucha discloses that the first substrate heating assembly has a plate 32 with a first surface and an opposite surface and a heating element 70 as shown in Figure 1 of Suzurucha.

With respect to claim 15, while it is not known to the examiner what material plate 32 is made of, all materials are thermally conductive at least to a small extent.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzurucha (JP 11-198362) as applied to claims 1 and 13-15 above, and further in view of Johnson (US 2004/0104990).

Suzurucha discloses the claimed image producing machine except for the intermediate imaging member. However, Johnson discloses an ink jet printer including an intermediate imaging member 104 as shown in Figure 1 of Johnson. It would have been obvious to combine

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the teaching of Johnson with the image producing machine disclosed by Suzurucha for the advantage of decreasing cockle (see last two sentences of the abstract of Johnson).

6. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzurucha (JP 11-198362) as applied to claims 1, 13 and 14 above, and further in view of Nunokawa (US 2004/0145617).

With respect to claim 4, Suzurucha discloses the claimed ink image producing machine except for the substrate registration means. However, Nunokawa teaches an ink jet printer with a substrate registration means 13,17A,18A upstream of an image receiving station at printing carriage 41 as shown in Figure 3 and 18A-18D of Nunokawa. It would have been obvious to combine the teaching of Nunokawa with the image producing machine disclosed by Suzurucha for the advantage of eliminating any skew in the substrate to be printed thus realizing an alignment between the substrate and the printed information.

With respect to claim 11, the registration device taught by Nunokawa includes the rollers 17A and 18A that are immediately upstream of the print head 21. Suzurucha discloses a pair of rollers 62, 64 immediately upstream of the print head 12. Thus it would have been obvious to arrange the registration device in the location of roller 64,62 downstream of the second substrate heating assembly.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzurucha (JP 11-198362) as applied to claims 1 and 13-15 above, and further in view of Szlucha et al. (US 5,742,315).

Suzurucha discloses the claimed ink image producing machine except that it is not clear if the first substrate heating assembly includes a continuous, full-width heating element having a first length equal to a width of each substrate. However, Suzurucha does indicate that the heater disclosed in the patent to Szlucha et al. can be used as the heater 70 disclosed by Suzurucha. Szlucha et al. does disclose a full page-width heating element 50 as shown in Figure 4 of Szlucha et al. It would have been obvious to combine the teaching of Szlucha et al. with the image producing machine disclosed by Suzurucha since Suzurucha suggests the use of the teaching of Szlucha et al. (see paragraph [0022] of the machine translation of Suzurucha).

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzurucha (JP 11-198362) as applied to claims 1 and 13-15 above, and further in view of Hirai (US 2004/0075726).

Suzurucha discloses the claimed ink image producing machine except for the temperature sensing and control means. However, Hirai teaches an ink jet printer with a heating assembly as stated in paragraph [0096] of Hirai, “the heating means of this invention is required to maintain a specific temperature (being in the range of 35-55° C.) in a heating section, and so, it is preferable to maintain the temperature of a recording medium at a constant level, providing a temperature detecting means for the recording medium and a temperature control means to adjust it to the specific temperature based on feedback of the detected temperature.” It would have been obvious to control the temperature of the heating assembly and substrate in order to maximize the advantages of heating the substrate before the substrate is printed by maintaining precise control of the temperatures.

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9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzurucha (JP 11-198362) as applied to claims 1 and 13-15 above, and further in view of Bergman et al. (US 4,395,036).

Suzurucha discloses the claimed multi-stage pre-transfer substrate heating assembly except that it is not known if the plate 32 is made of a aluminum. However, Bergman et al. teaches that it is known to make guiding plates in an image forming device of aluminum. In col. 3, lines 53-55 Bergman et al. teaches aluminum guides 52 and 54. It would have been obvious to combine the teaching of Bergman et al. with the multi-stage pre-transfer substrate heating assembly disclosed by Suzurucha for the advantage of aluminum being a light weight and strong material.

Allowable Subject Matter

10. Claims 3, 8, 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 6 and 12 are objected to as being dependent upon a rejected base claim and objected to for containing the above mentioned informalities, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and rewritten to overcome the above mentioned informalities.

12. The following is a statement of reasons for the indication of allowable subject matter:

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Claims 3, 8, 9 and 10 have been indicated as containing allowable subject matter primarily for the speed control means.

Claims 6 and 12 have been indicated as containing allowable subject matter primarily for the second substrate heating assembly having at least one heating element having a length less than a width of the substrate, the second length extending across only a portion of a path of movement of each substrate.


13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ikeda et al. is cited to show another example of an image producing means with a first and second substrate heating assembly.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Colilla whose telephone number is (571)272-2157. The examiner can normally be reached Mon.-Thur. between 7:30 am and 6:00 pm. Faxes regarding this application can be sent to (703)872 - 9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached at (571)272-2168. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 28, 2004


Daniel J. Colilla
Primary Examiner
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